BROWNFIELD CLEANUP PROGRAM
DECISION DOCUMENT

Long Dock Beacon Site
City of Beacon, Dutchess County
Site No. C314112

April; 2008

Statement of Purpose and Basis: This Brownfields Cleanup Program (BCP) Decision Document presents the remedy approved by the New York Department of Environmental Conservation (the Department) for the Long Dock Beacon Site. The approved remedial program was chosen in accordance with 6 NYCRR Part 375-3.8 (c) and relative guidance to remedy selection in the BCP.

Description of the Site: The Long Dock Beacon Site is an irregularly shaped 8.85 acre former industrial parcel located on a peninsula adjacent to the Hudson River in the City of Beacon, Duchess County, New York (see Figure 1). The site is bordered by the Hudson River to the west, Red Flynn Drive to the east, land owned by Scenic Hudson to the south and the Hudson River and the Metro North Railroad station to the north. The site is currently inactive, with a former residential dwelling and storage barn on the north side of the site. The Dutchess Boat Club also uses the south side of the site to access the Hudson River. The surrounding area has a combination of residential, commercial, and light industrial land uses.

Prior uses of the site included a salvage yard, which operated on the northeastern portion of the site from approximately 1962 to 1983 and a Major Oil Storage Facility (MOSF), which operated on the southern portion of the site from approximately 1936 to 1994. In addition unregulated filling of the site may have also led to site contamination. The site is comprised of two former Voluntary Cleanup Program (VCP) sites, the Beacon Salvage site (V00444) and the Garret Storm site (V00096). An Interim Remedial Measure (IRM) to remove petroleum contamination was completed at the Garret Storm site in 2000 and an IRM to remove polychlorinated biphenyl (PCB) contamination was completed at the Beacon Salvage site in 2002.

Nature and Extent of Contamination: A Remedial Investigation (RI) was conducted at the site in 2006 and 2007. Primary contaminants of concern identified during the RI based on the Standards, Criteria, and Guidelines (SCGs) established for this site include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals (arsenic, lead, mercury), and PCBs. Figure 2 illustrates the contamination delineation as determined by the RI.

Contaminants of concern in soil, associated with the former MOSF, include VOCs and SVOCs in exceedence of SCGs. SVOC contamination in soils in the former MOSF area extends vertically from approximately 3 to 5 feet below surface grade, while VOC contamination in soils in the former MOSF area extends vertically from approximately 3 to 20 feet.

Contaminants of concern associated with the historic salvage operations of the site include PCBs, metals (arsenic, lead, mercury) and SVOCs [mostly Polycyclic Aromatic Hydrocarbons (PAHs)] in exceedence of SCGs. PCB contamination in soils is limited to the northeast portion of the site from 0 to 3 feet below surface grade. Arsenic contamination in soils is present in several areas throughout the site at 0 to 4 feet and extends to a depth of 10 feet in isolated areas on the eastern portion of the site. Lead contamination is present in surface soils in the northeast portion of the site as well as in subsurface soils in three isolated areas. SVOC and mercury contamination in soils is present in an isolated pocket in the northeast portion of the site from 7 to 9 feet below grade.

Groundwater contamination is present in the area of the former MOSF and extends off-site, south of the former MOSF. Low-levels of VOCs and SVOCs are present in groundwater within the area of the former MOSF. No site related surface water or sediment contamination was encountered during the RI.

The contamination of soil and groundwater identified above does not represent a significant threat to public health or the environment; however remedial action to address these areas is required.

Description of the Remedy: The remedy is more fully described in the Remedial Alternatives Report and Remedial Work Plan, dated February 2008. The remedy addresses only on-site contamination, as the BCP applicant is a volunteer. The off-site exposure assessment did not identify any exposures.

The elements of this Track 4 remedy are as follows:

1) A remedial design program to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedy.

2) Excavation and off-site disposal of soil/fill material identified as containing concentrations of PCBs, metals (arsenic, lead, mercury) and SVOCs that exceed the 6 NYCRR Part 375 Soil Cleanup Objectives (SCOs) for commercial land use. The volume of this material is estimated at from 8,000 to 11,500 cubic yards. Excavated areas will be back-filled utilizing clean fill meeting Department guidelines and restored to grade. The areas of soil removal are shown on Figure 2.

3) Implementation of in-situ chemical oxidation (ISCO) treatment to reduce petroleum contamination, which is present within the site boundaries, in the south-central portion of the site. The periodic injection of oxidant will continue until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible. The area of ISCO treatment is shown on Figure 2.

4) Installation of a one foot thick soil cover over the entire Site that also could include a combination of building footprints and paved surfaces to eliminate direct contact with contamination remaining in the site soil. A visual demarcation layer will be placed beneath

the Site cover.

5) Since the remedy results in contamination above unrestricted levels remaining at the site, an institutional control in the form of an environmental easement will be required for the site. The environmental easement will:
   (a) restrict the use of the site to commercial uses;
   (b) restrict the use of groundwater at the site;
   (c) require the management of the site in accordance with the provisions of the site management plan, to be approved by the Department; and
   (d) require the property owner complete and submit to the NYSDEC a periodic certification.

6) A site management plan (SMP) will be developed and implemented. The SMP will identify the institutional controls and engineering controls (IC/ECs) required for the proposed remedy and detail their implementation. The SMP for the proposed remedy will include:
   (a) an IC/EC control plan to establish the controls and procedures necessary to; (i) manage remaining contaminated soils that may be excavated from the site during future activities, including procedures for soil characterization, handling, health and safety of workers and the community as well as, disposal/reuse in accordance with applicable NYSDEC regulations and procedures; (ii) evaluate the potential for vapor intrusion for any buildings developed on the site, including mitigation of any impacts identified; (iii) installation of a vapor barrier and sub-slab depressurization system (SSDS) as necessary under any proposed on-site structures to minimize soil vapor intrusion.; (iv) maintain use restrictions regarding site development or groundwater use identified in the environmental easement; and (v) require the property owner to provide an institutional control/engineering control (IC/EC) certification on a periodic basis;
   (b) a monitoring plan to monitor the effectiveness of the ISCO on groundwater and to monitor the effectiveness of the proposed remedy and the trend of contaminants concentrations in the groundwater;
   (c) an operation and maintenance plan to provide the detailed procedures necessary to operate and maintain the remedy, including the ISCO and SSDS treatment systems. The operation of the components of the remedy will continue until the remedial objectives have been achieved, or until the NYSDEC determines that continued operation is technically impracticable or not feasible.

7) The property owner will provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submission will:
   (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications;
   (b) allow the Department access to the site; and

(c) state that nothing has occurred that would impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action and will allow for the identified use of the site. This remedy utilizes permanent solutions and alternative treatment to the maximum extent practicable, and satisfies the preference for remedies that reduce remove or otherwise treat or contain sources of contamination and protection of groundwater.

MAY 8, 2008
Date

Robert W. Schick, P.E.
Director
Remedial Bureau C
Division of Environmental Remediation

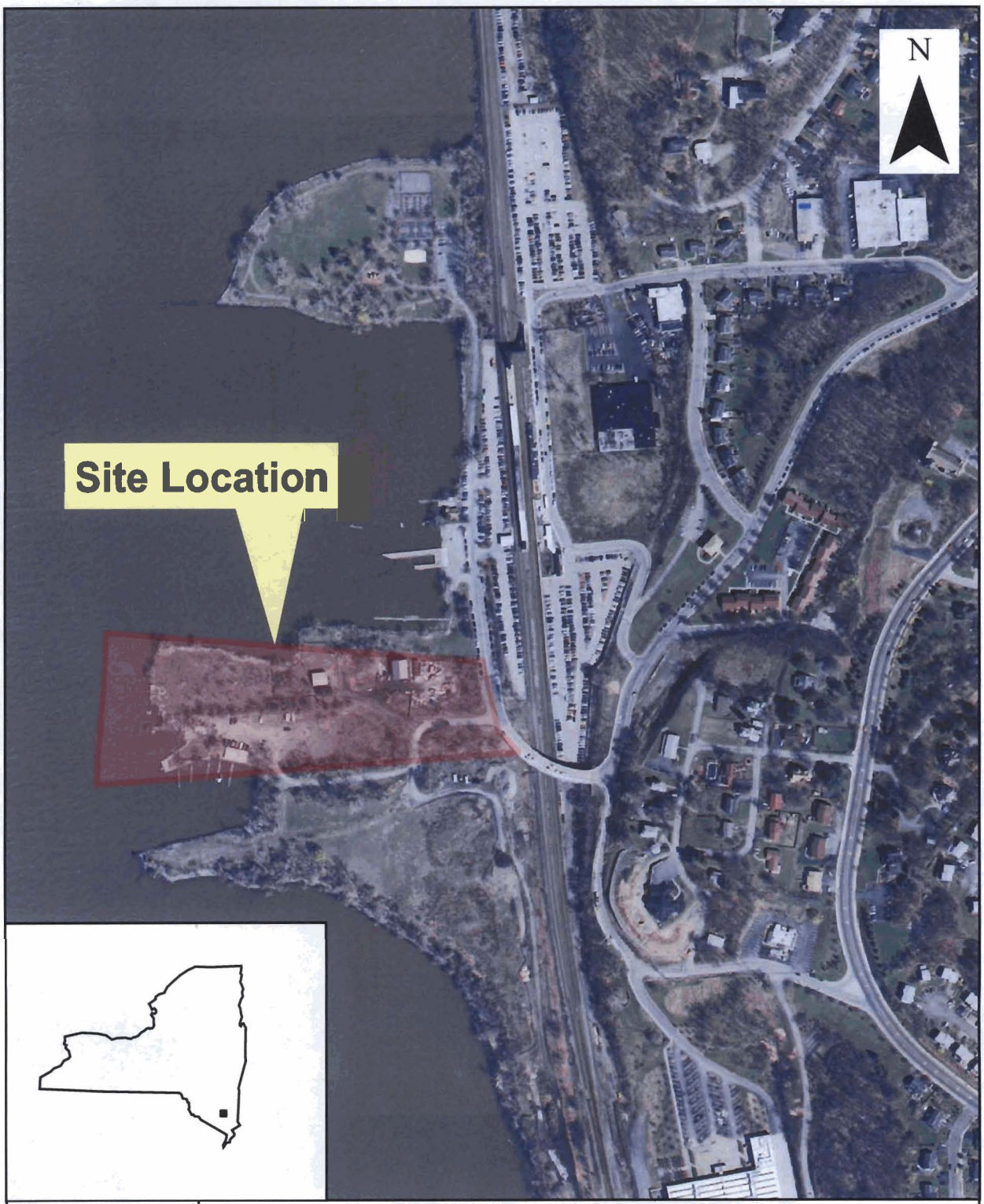
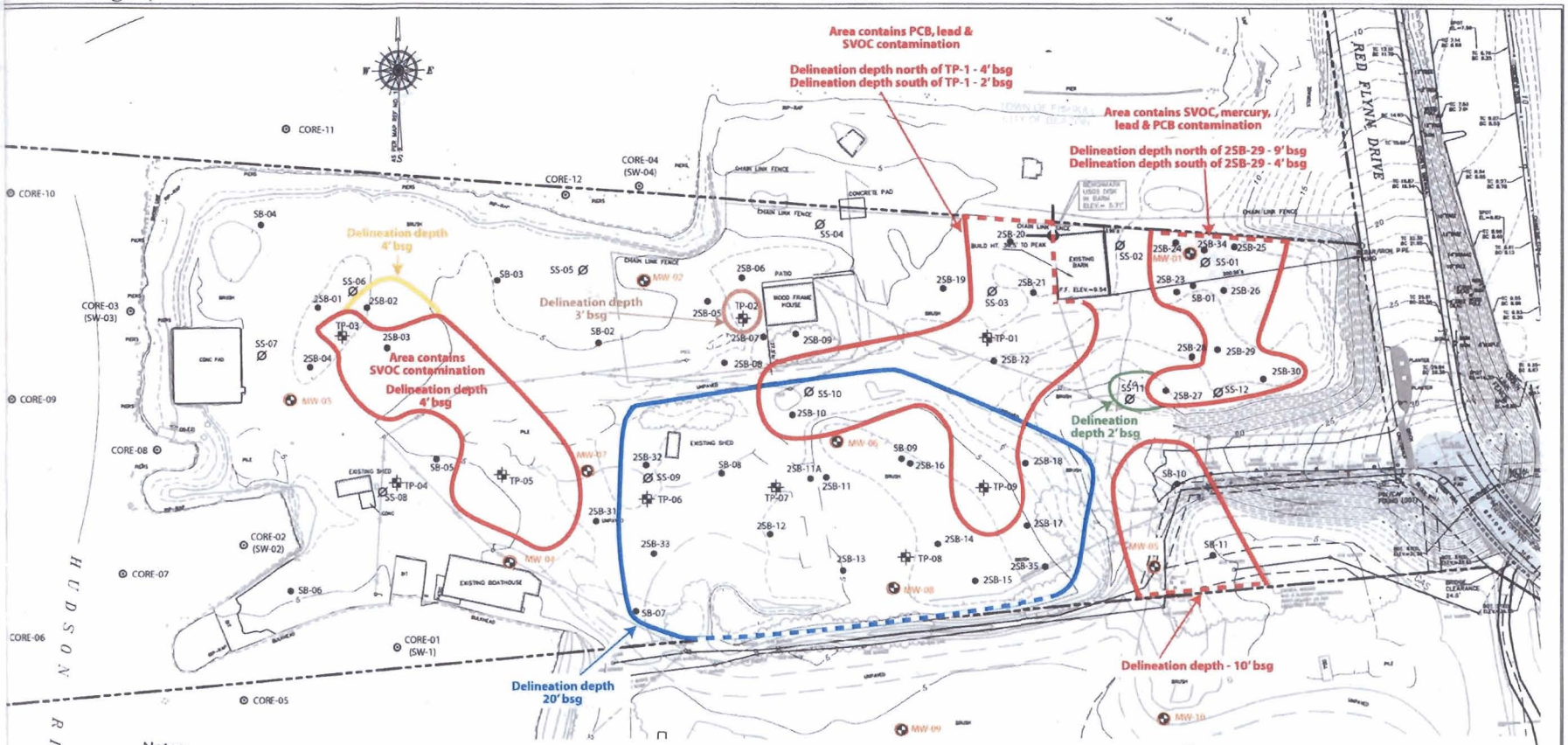


Figure 1 - Site Location Map
Long Dock Beacon Site
Site No. C314112
City of Beacon, Dutchess County, New York
1:5,000



Notes:
1) Areas with arsenic contamination also contain other contamination constituents as indicated.
2) The criteria for delineation in this figure are the NYSDEC Remedial Program SCOs for Commercial Restricted Use.
3) Dotted line indicates contamination not delineated beyond property boundary or structure footpint.

Figure 2 - Delineation of Contamination

Long Dock Beacon
Red Flynn Drive
City of Beacon
Dutchess County, New York

Legend:
- Soil Boring
- Test Pit
- Surface Sample
- Sediment Sample
- Monitoring Well
- Area of former MOSF (VOC, SVOC and TPH-DRO contamination)
- Boundary of areas with arsenic contamination
- Site Boundary
- Boundary of area with lead contamination and no arsenic contamination
- Boundary of area with PCB contamination and no arsenic contamination
- Boundary of area with significant SVOC contamination and no arsenic contamination

ESI File: SG96152.51
November 2007
Scale as shown
Appendix A